

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims**

Claim 1 (Original): A method of enhancing mucus function comprising administering an effective amount of a mucothickening agent to a subject in need thereof.

Claim 2 (Currently Amended): The method according to claim 1, wherein the mucus function is selected from respiratory ~~tract~~ tract mucus clearance, epithelial protection, ion exchange and nutrient intake.

Claim 3 (Currently Amended): The method according to claim 2, wherein the respiratory ~~tract~~ tract mucus clearance is mucociliary clearance and/or cough clearance.

Claim 4 (Original): The method according to claim 1, wherein the enhancing of mucus function is improving physical and/or biochemical properties of the layer of mucus lining the respiratory system, digestive system, urinary tract and/or the reproductive system.

Claim 5 (Original): The method according to claim 4, wherein the enhancing of mucus function is improving physical and/or biochemical properties of the layer of mucus lining the digestive system to enhance nutrient intake processes, epithelium protection and drug absorption.

Claim 6 (Currently Amended): The method according to claim 4, wherein the enhancing of mucus function is improving physical and/or biochemical properties of the layer of mucus lining the reproductive system to enhance conception and/or inhibit, transmission of sexually transmitted diseases (STD).

Claim 7 (Currently Amended): ~~A method of~~ The method according to claim 1, wherein the enhancing of mucus function is for inhibiting aerosolization and/or transmission of an airborne disease ~~comprising administering an effective amount of a mucothickening agent to a subject in need thereof.~~

Claim 8 (Original): The method according to claim 7, wherein the airborne disease is selected from, Severe Acute Respiratory Syndrome (SARS), tuberculosis and influenza.

Claim 9 (Currently Amended): The method according to claim 7 or 8, wherein the inhibition of aerosolization and/or transmission of an airborne disease occurs by decreasing aerosolizable respiratory secretions in a way to minimize any adverse effect on mucus clearance, optionally in combination with enhancement of mucus clearance.

Claim 10 (Currently Amended): ~~A method of~~ The method according to claim 1, wherein the enhancing of mucus function is for treating a condition related to thin mucus or cilia malfunction or non-function, ~~comprising administering an effective amount of a mucothickening agent to a subject in need thereof.~~

Claim 11 (Currently Amended): The method according to claim 4-10, wherein the conditions related to thin mucus or cilia malfunction or non-function include any condition of impaired airway secretion management.

Claim 12 (Original): The method according to claim 11, wherein the conditions are selected from cystic fibrosis, asthma, Chronic Obstructive Pulmonary Disease (COPD), spinal chord injury, neuromuscular disease and those conditions or diseases requiring assisted mechanical ventilation.

Claim 13 (Cancelled Herein):

Claim 14 (Currently Amended): The method according to ~~any one of claims 1-13~~ claim 1, wherein the mucothickening agent is any agent that promotes the formation of one or more of the following in mucus: covalent bonds, ionic bonds, hydrogen bonds, van der Waals' forces, intermingling or extracellular DNA & F-actin network.

Claim 15 (Original): The method according to claim 14, wherein the mucothickening agent is selected from one or more of high molecular weight polysaccharides, salts of tetrafunctional anions, salts of divalent cations and polycationic agents, and other pharmaceutically acceptable salts thereof.

Claim 16 (Original): The method according to claim 15, wherein the mucothickening agent is selected from one or more of dextran, sodium tetraborate, calcium chloride, magnesium chloride, polylysine, polyarginine and polymyxin B.

Claims 17-25 (Cancelled Herein).